

# PATENT ABSTRACTS OF JAPAN

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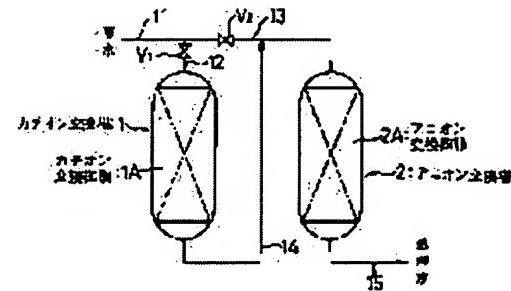
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## (54) ION EXCHANGE DEVICE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve the removal of corrosive ions, and remove cation to the level of desired concentration by connecting a cation exchange column and an anion exchange column with a raw water piping through valves in which the flow rate can be regulated and filling the columns with cation exchange resin and anion exchange resin of uniform particle diameters respectively.

**SOLUTION:** A cation exchange column 1 and an anion exchange column 2 are connected respectively with a raw water introduction piping 11 by pipings 12 and 13 through flow regulating valves V1 and V2. The outflow water in the cation exchange column 1 is introduced into the anion exchange column 2 through a piping 14. Water passing through the anion exchange column 2 is discharged out of a system through a piping 15. H<sup>+</sup> type and Na<sup>+</sup> type exchange resins 1A of average particle diameter of 400–500μm is filled in the cation exchange column 1. Anion exchange resin 2A of HCO<sub>3</sub><sup>-</sup> type of average particle diameter of 450–650μm is filled in the anion exchange column 2. The particles in the range of particle diameter of 0.9–1.1 times as large as the average diameter are set to be 85% or more of the total particles in both exchange resins 1A and 2A.



## LEGAL STATUS

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